

NATURAL RESOURCES ACCOMPLISHMENTS  
2010-2014  
Governor Robert F. McDonnell



Douglas W. Domenech  
Secretary of Natural Resources

# OFFICE OF THE SECRETARY OF NATURAL RESOURCES



**David Paylor—Director**  
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**Bob Duncan—Director**  
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**David Johnson—Director**  
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**Doug Domenech**  
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**Anthony Moore**  
Deputy Secretary of Natural Resources for Chesapeake Bay Restoration

**Sara Maddox**  
Assistant Secretary of Natural Resources

**Jack Travelstead—Commissioner**  
Marine Resources Commission

**Kathleen Kilpatrick—Director**  
Department of Historic Resources

**Joe Keiper—Director**  
Virginia Museum of Natural History

**Steve Bowman—(not pictured)**  
Served as Commissioner of the Virginia Marine Resources Commission until March 2012

**Emily Barrett—(not pictured)**  
Assistant Secretary of Natural Resources



“We know that when we take common sense steps to encourage conservation and environmental protection it is good for our environment, our quality of life and our economy.”

*-Governor Bob McDonnell*

photo by M. White

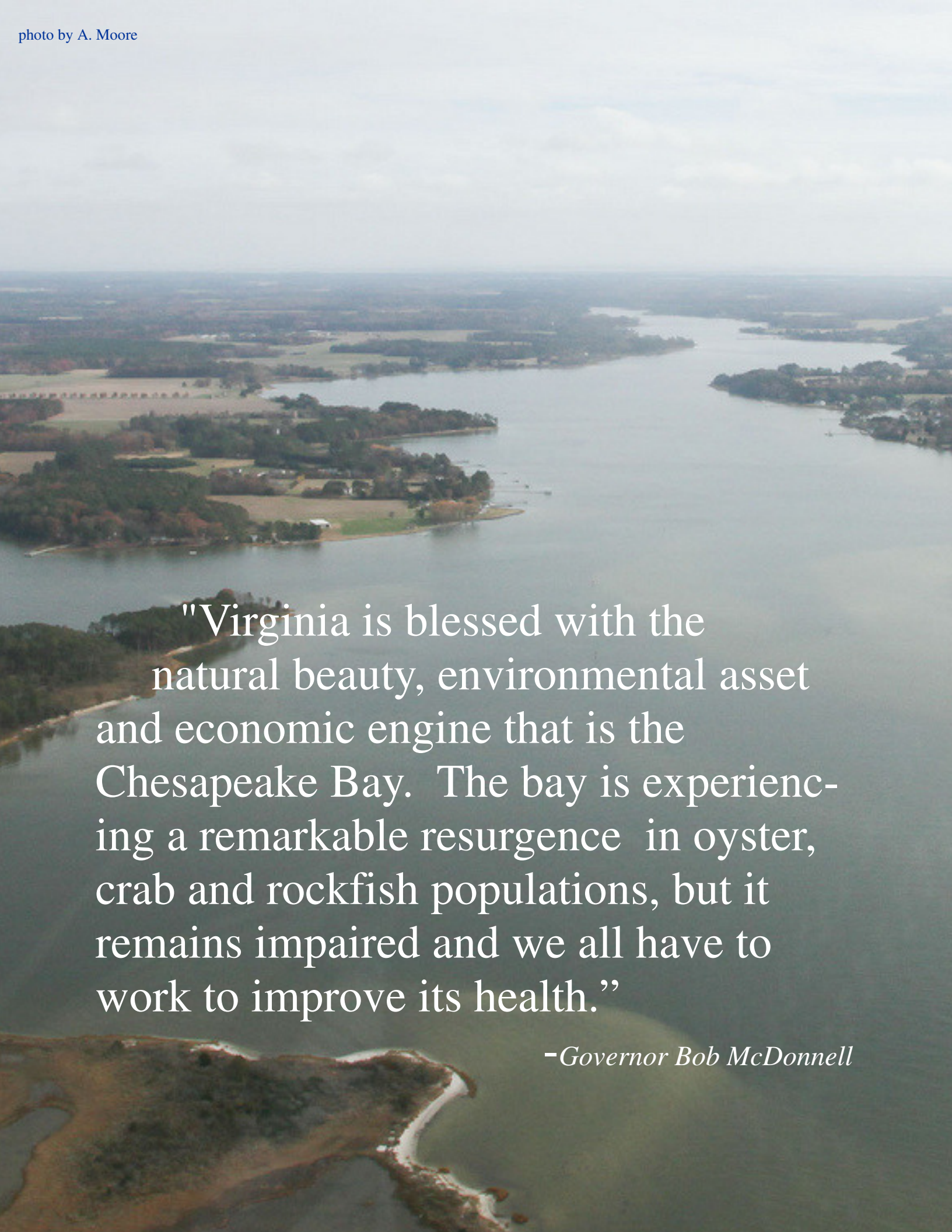


# MAJOR GOALS:

1. Improve the Health of the *Chesapeake Bay*.
2. Continue Virginia's Efforts in *Land Conservation*.
3. Make Virginia the *Energy Capital* of the East Coast.
4. Reduce the size and scope of government through **Government Reform**.





An aerial photograph of the Chesapeake Bay, showing a wide expanse of water with several islands and peninsulas. The land is covered in green trees and some brown fields, suggesting a mix of forest and agriculture. The sky is overcast with grey clouds. The water is a calm, greyish-blue color.

"Virginia is blessed with the natural beauty, environmental asset and economic engine that is the Chesapeake Bay. The bay is experiencing a remarkable resurgence in oyster, crab and rockfish populations, but it remains impaired and we all have to work to improve its health."

*-Governor Bob McDonnell*

# **Water Quality: *By The Numbers***

**\$218 MILLION**

DEPOSITED TO THE WATER QUALITY  
IMPROVEMENT FUND

**\$101 MILLION**

BOND FOR UPGRADES TO WASTEWATER  
TREATMENT PLANTS

**\$55 MILLION**

GRANTS FOR STORMWATER PROGRAMS

**\$5 MILLION**

OYSTER RESTORATION PROGRAMS

**\$75 MILLION**

IMPROVING COMBINED SEWER OVERFLOW FOR THE  
CITY OF RICHMOND AND LYNCHBURG

**\$11 MILLION**

WATER QUALITY ISSUES IN  
HOPEWELL, ALEXANDRIA AND APPOMATTOX

**The McDonnell Administration has invested  
OVER \$460 MILLION in Water Quality.**



**“The oyster industry is growing and has a bright future. Growth means jobs. The Governor and his Administration deserve a lot of credit.”**

**- Tommy Kellum  
Kellum Seafood**



photo by M. White

- A record \$5 million investment by Governor McDonnell and the General Assembly went to Virginia's Oyster Replenishment Fund.
- Harvest of oysters has increased ten-fold over the past decade, from 23,000 bushels in the 2001 oyster season to 320,000 bushels in the 2012-2013 season.
- Dockside value has increased from \$575,000 to more than \$8.75 million and 2013 was the largest harvest since 1987, having a dockside value of over \$16.2 million.

# CHESAPEAKE BAY RESTORATION

- The blue crab population reached its highest level in 20 years, and overfishing is no longer occurring.
- The summer flounder stocks quadrupled under a stock rebuilding plan. Recreational size limits were reduced, allowing anglers to keep more of the fish they catch.
- The Governor signed legislation that contributed significantly to Virginia's effort in cleaning up the Bay including:
  - Eliminated phosphorus from usable fertilizer beginning December 31, 2013.
  - Requiring golf courses to implement nutrient management plans by 2017.
  - Requiring VDACS to establish reporting requirements for contractor applicators who apply fertilizer to more than 100 acres annually.
  - Allowing farmers who develop agriculture resource management plans to be deemed as being in full compliance with any load allocation contained in a TMDL.
- Improve and expand the use of nutrient credits in Virginia. Building on our existing nutrient credit trading program and will be a key tool in meeting and maintaining water quality in the Chesapeake Bay as well as offering flexibility in meeting nutrient reduction requirements statewide.







- Virginia developed and EPA approved our Chesapeake Bay Watershed Implementation Plan in 2010.
- The United States Environmental Protection Agency approved both Phase I and Phase II of Virginia's Water Quality Plan.
- In 2011, Virginia exceeded the pollution reduction milestone goals for wastewater treatment plants by 2000% and exceeded 2013 nitrogen reduction goals by more than 680,000 pounds two years early.
- Virginia restored 1,653 acres of wetlands in 2011, more than double that of any other jurisdiction.
- In 2012, EPA awarded Virginia with the "Biggest Loser" Award for ranking first in Region 3 and second in the nation for reducing non-point source nitrogen pollution.
- Virginia reported more phosphorus and nitrogen reductions than any other state in Region 3 during 2012.
- Virginia is exceeding our commitments to the Chesapeake Bay agreement and in the last four years reduced nitrogen pollution by 11.1%, phosphorus pollution by 7.7%, and sediment pollution by 6.9%.





photo by M. White

“Governor McDonnell has done more  
for battlefield preservation than any  
other governor in the  
United States of America.”

*-Jim Lighthizer  
President, Civil War Trust*



# Land Conservation: *By the Numbers*

## 232,600 acres

have been conserved since Governor McDonnell took office in January 2010.

The Department of Historic Resources acquired 75 preservation easements totaling **6,819**

The Virginia Land Conservation Foundation has awarded over \$4.5 million for grants funding 29 projects across the Commonwealth, to conserve over **4,300 acres**.

The Department of Conservation and Recreation's Division of Natural Heritage added **5,334 acres**.

**9,454 acres** were opened for Wildlife Management Areas under the Department of Game and Inland Fisheries.

Virginia State Parks added **413 acres**.

Virginia Outdoors Foundation added **148,000 acres** of easements.



# LAND CONSERVATION

- The Governor included over \$6 million in his budgets for the Virginia Land Conservation Foundation and the Virginia Outdoors Foundation, and an additional \$4 million in his outgoing budget.
- The Department of Historic Resources acquired 75 preservation easements totaling 6,819 acres.
- The Department of Historic Resources acquired 49 easements totaling 6,314 acres of Civil War battlefield land across the Commonwealth.
- During the course of the Sesquicentennial of the Civil War, the Commonwealth established the Civil War Sites Preservation grant program and has awarded nearly \$4 million in grants conserving 3,229 acres on 19 separate historically significant battlefields.
- In November 2012, an easement was obtained on Werowocomoco, a globally significant location, the capital of the Powhatan chiefdom, where John Smith is said to have met Pocahontas.





“We strongly support an 'all of the above' approach to energy production in Virginia. Simply put, more responsible energy production, from coal to oil to natural gas to wind, equals more jobs for Virginians and more energy security for America.”

*-Governor Bob McDonnell*



photo by M. White

# ENERGY DEVELOPMENT

- The Governor was elected to serve as Chair of the Southern States Energy Board, and used the opportunity to develop a single regional voice to advocate for an all of the above strategy for energy development, particularly in Washington, and to advance clean coal research, carbon capture and sequestration progress, and generally support development of our domestic energy resources to secure our energy future while creating good jobs and new revenues.
- Supported and signed legislation requiring 80% of revenue and royalties from offshore oil and natural gas production to go to transportation and 20% to go to the Virginia Coastal Energy Research Consortium.
- Created the Virginia Nuclear Energy Consortium Authority which established the Authority, making the Commonwealth a national leader in nuclear energy.
- Led and conducted the first and only state investigation and analysis of the possibility of uranium mining in Virginia. The study was a multi-agency effort that set out the regulatory framework that would be necessary to protect citizens and the environment from the unique risks that would come with development of this valuable energy resource.
- Proposed successful legislation to allow natural gas infrastructure expansion for the purpose of economic development projects where it is not already available.
- Signed legislation requiring the Director of the Virginia Department of General Services to develop a plan providing for the replacement of vehicles in the centralized fleet that are rotated out of service with vehicles that operate using natural gas, electricity, or other alternative fuels, to the greatest extent practicable.





Governor McDonnell established the first of its kind Governor's Conference on Energy, creating an annual opportunity for energy businesses from throughout the region to gather and meet with local, state, and federal policy makers to bring attention to and encourage growth in Virginia's energy economy.

Speakers over the past four years have included:



photo by M. White

- T. Boone Pickens, Chairman, BP Capital Management
- Scott Angelle, Lieutenant Governor, State of Louisiana
- Jim Rogers, CEO, Duke Energy
- Thomas Farrell, CEO, Dominion Resources
- Michael Quillen, President and CEO, Alpha Natural Resources
- Michael Petters, President and CEO, Huntington Ingalls Industries
- Dr. Ripudaman Malholtra, Co-author, *A Cubic Mile of Oil*

“Offshore energy production is one part of an ‘all of the above’ approach to ensuring energy security....Today's announcement means future new jobs for Virginians and much-needed revenue for our Commonwealth. Again, I applaud the President for his decision, and thank all the Virginia leaders from both parties who have worked together to make this announcement possible.”

-Governor Bob McDonnell



- The Commonwealth was awarded Lease Sale 220, although it was later cancelled after the Gulf oil spill.
- Through the Secretary of Natural Resources, the Governor pushed Congress and the Department of the Interior to reinstate Lease Sale 220, and include Virginia in the 2012-2017 Outer Continental Shelf plan.
- Worked with Virginia's Congressional delegation to support legislation that would require a commercial lease sale of federal waters off the coast of Virginia for offshore oil and gas development and provide revenue sharing.
- The Governor was a founding member of the Outer Continental Shelf Governors Coalition to promote the responsible development of oil and gas resources offshore.



# Virginia Selected for Nation's Second Offshore Wind Energy Lease Sale



photo by M. White

“Virginia's coast is ideal for wind development...Virginia enjoys a robust commercial ship building industry poised to become the center of construction for the component parts needed to build the specialized ships, turbines and towers necessary for these upcoming leases, and potentially for additional future wind leases on the east coast. This will result in millions of dollars in industrial activity and the creation of many new high-skilled jobs in our state.”

*-Governor Bob McDonnell*

# OFFSHORE WIND

**The McDonnell Administration has taken numerous steps to position the Commonwealth as a national leader in offshore wind energy including:**

- The Department of the Interior held the second in the nation offshore wind lease sale of 112,000 acres of Virginia's OCS.
- Proposing successful legislation to create the new CEMIG program to focus existing resources for energy development incentives on targeted nuclear, wind, solar and biomass alternative energy projects. The legislation expanded Virginia's economic incentive programs for those companies willing to locate and innovate right here in the Commonwealth and will help make Virginia a hub for clean and renewable energy production.
- Proposing successful legislation to create a Green Job Creation Tax Credit, an annual \$500 tax credit for every green job created with a salary of \$50,000 or more, for five years and up to 350 jobs.
- Joining and supporting the work of former Interior Secretary Ken Salazar's offshore wind consortium to reform the permitting process and develop leasing and permitting timelines that would support financing and actual project development; led to the Secretary's "Smart from the Start" program.
- Adopting a "first of its kind" in the nation Permit By Rule to streamline permitting of small (< 100 MW) land-based and offshore (state waters) renewable energy projects by addressing all issues of species and habitat, water quality and other state regulatory issues in a single permitting process agreed upon by all interested agencies and other stakeholders.
- Creating the Virginia Offshore Wind Development Authority (VOWDA) which oversees the data gathering, research and planning that must be done to support offshore wind development off of Virginia's coast and track issues as they arise, and makes recommendations for promoting Virginia offshore wind development.
- Conducting several studies to quantify Virginia's offshore resource, and the transmission resources needed and available to support development of that offshore resource.
- Partnering with the BOEM to conduct a regional ocean geological survey, which will provide data about the ocean floor that will be made available to developers.
- Submitting applications for two research leases - one in the wind area designated by the Department of the Interior in federal waters, and one in state waters - to facilitate turbine testing and future gathering of meteorological data.
- Permitted America's first water-based wind turbine for Gamesa, a Spanish company, but the project was later postponed.





"We are committed to making state government smaller, more innovative and transparent."

*-Governor McDonnell*

# GOVERNMENT REFORM

- Moved several of the Department of Conservation and Recreation's water quality programs to the Department of Environmental Quality, so that all water quality programs are primarily at one state agency.
- Eliminated and consolidated a number of Natural Resource Boards and Commissions, including the following:
  - Eliminated Chesapeake Bay Local Assistance Board
  - Eliminated the Scenic River Board
  - Eliminated the Chippokes Plantation Farm Foundation Board
  - Eliminated the Recycling Markets Development Council
  - Eliminated the Foundation for Virginia's Natural Resources
  - Reducing the size of the Board of Trustees for the Virginia Museum of Natural History from 25 members to 15.
- The Department of Conservation and Recreation moved all Richmond operations into the State office building (Main Street Center). This is the first time that the agency has been in one building and it will result in real operational cost savings.
- The Natural Resources secretariat reduced the number of full-time employees at all natural resources agencies and held the line on the base budget.
- The Department of Game and Inland Fisheries and the Department of Motor Vehicles announced a partnership to streamline registration of boats or boat trailers at DGIF or DMV, as well as hunting and fishing licenses.
- Eliminated the Virginia Council on Indians, which was no longer serving its purpose for Virginia's recognized tribes.





# A Listing of Additional Accomplishments for the Office of the Secretary of Natural Resources



# VIRGINIA MARINE RESOURCES COMMISSION

- **Tangier Seawall Project Approved:** The agency is spear-heading the Commonwealth's partnership with the Army Corps of Engineers to construct a long-delayed seawall/jetty to protect the economically crucial harbor on Tangier Island.
- **Crab Stock Hit the Highest Level in 20 years:** The results of the 2012 Blue Crab Winter Dredge Survey received in April 2012 determined the total population of blue crabs in the Chesapeake Bay reached 764 million. This was a 66 percent increase above the 2011 abundance level of 460 million crabs, and was the highest level recorded in almost 20 years, since 1993.
- **Recreational Flounder Size Limits Lowered:** In February 2013, the Commission lowered the recreational flounder size limit for the fourth year in a row. This allows recreational anglers to keep more of the fish they catch. The size limit was reduced from 16.5 inches to 16 inches. The 2010 size limit was lowered from 19 inches to 18.5 inches. That was lowered to 17.5 inches in 2011, and lowered again in 2012 to 16.5 inches, with a four fish daily possession limit. This continual lowering of the flounder catch limits was possible due to the success of a multi-year stock rebuilding effort, during which the species biomass more than quadrupled.
- **Marine Police Successes:** The Virginia Marine Police was issued perfect marks in 2010, 2011 and 2012 by the U.S. Food and Drug Administration for extensive and effective enforcement of shellfish harvesting regulations to ensure shellfish are not mistakenly harvested from polluted waterways to endanger consumers. Effective enforcement is also crucial to preventing FDA restrictions that would likely terminate Virginia access to the raw oyster market.
- **Offshore Wind Approved:** VMRC unanimously approved the country's first offshore wind turbine prototype in March 2012. Unfortunately the project was later cancelled.
- **Ghost Pot Program:** The Marine Resources Commission funded a four-year program that ended in 2012 to collect derelict crab pots, and other marine debris, from the bottom of the Chesapeake Bay and its tributaries. The participating watermen retrieved more than 32,000 so-called ghost pots, along with more than 159 lost fishing nets and 1,450 pieces of junk. The program also yielded important information on the duration of ghost pots in a marine environment and that they continue to capture and kill a wide variety of animals after they are lost.



## DEPARTMENT OF CONSERVATION & RECREATION

- **Development of Resource Management Plan Program:** In 2011, the Virginia Soil and Water Conservation Board authorized and directed the development of Resource Management Plan regulations. The regulatory action, which will be effective in 2014, is intended to encourage farm owners and operators to voluntarily implement a high level of BMPs on their farmlands that are protective of water quality and that may be applied towards necessary nutrient and sediment reductions associated with the Chesapeake Bay WIP and other TMDLs. Participating farmers may be issued a Certificate of RMP Implementation upon completion and implementation of the BMPs required in the plan which is good for nine years and provides a regulatory safe-harbor for the duration of the certificate if the farmer remains compliant with his plan.
- **Dam Safety:** During this Administration, \$1,925,000 in 50% matching grants was awarded from the Dam Safety, Flood Prevention and Protection Assistance Fund to dam owners and localities for 280 dam safety and flood protection projects. In addition, special funding was allocated for specific dams including, \$489,996 for Rainbow Forest, \$500,000 for Lake Jackson (Prince William County), \$400,000 for Todd Lake (Headwaters SWCD), and \$408,402 for Mills Creek (Augusta County) to rehabilitate these dams. In addition about \$3,000,000 has been expended on local Soil and Water Conservation District Dams for the completion of Dam Break Inundation Studies.
- **Opened 36th State Park:** In July of 2013, Powhatan State Park officially opened, bringing the number of State Parks in the Commonwealth to thirty-six. The 1,564 acre State Park has 2.5 miles of frontage along the southern bank of the James River.
- **DCR Office Consolidation:** During 2013, DCR moved all Richmond operations into the State office building known as Main Street Center. This is the first time DCR has been in one building and will result in real operational cost savings.
- **Municipal Separate Storm Sewer System (MS4) General Permit and Individual Permit Advancements:** On July 1, 2013, the General Permit for Discharges of Stormwater from Small Municipal Separate Storm Sewer Systems (Small MS4s) became effective. The final General Permit established standard language for control of Small MS4 stormwater discharges through the development, implementation, and enforcement of an MS4 program to reduce the impacts of the stormwater discharges on the receiving streams to the maximum extent practicable. Similarly, the Arlington Municipal Separate Stormwater System individual permit was completed and signed in June 2013. This permit is the template for the remaining 10 individual MS4 permits.
- **Flora of Virginia:** Published *Flora of Virginia* for the first time since 1762; The 1,500 page book catalogues the 3,200+ Species of Native Virginia Plants.

## DEPARTMENT OF HISTORIC RESOURCES

- **Fort Monroe:** The agency has played a pivotal role in the ongoing planning for the site's future, after its return via BRAC to the Commonwealth. A Historic Preservation Advisory Group, chaired by DHR Director Kilpatrick, established recommendations to develop detailed design standards, explore partnership opportunities with NPS, and develop plans to tap the property's multiple resources for heritage, eco- and recreational-based tourism and educational programming. The Department's efforts to secure a viable future for this National Historic Landmark were recognized in awards from the Advisory Council on Historic Preservation and the Secretary of Defense.
- **Rehabilitation Projects:** Certified over 569 rehabilitation projects, representing approximately \$884 million of investment in Virginia's historic building stock.
- **Created VCRIS:** Initiated and brought to a successful conclusion a twelve month project to replace the Commonwealth's outdated electronic inventory of historic properties. The new system (the Virginia Cultural Resources Information System—VCRIS) will include an integrated GIS component which will provide the general public with basic information regarding historic sites, while licensed users, such as local governments and state and federal agencies, will be able to access detailed information and mapping.
- **Created ePIX:** Created the first online application/data exchange system for historic preservation projects in the nation—called ePIX (Electronic Project Information Exchange) enabling online submission and storage of applications and digital documents primarily to streamline and expedite the complex consultation process for state and federal projects subject to a historic preservation review.
- **National Park Service Projects:** On a national level, in Federal Fiscal Years '10, '11, and '12 Virginia ranked first in the nation for the number of project proposals approved by the National Park Service and ranked second for the number of projects approved.
- **Artifact and Technical Assistance:** Reached nearly 1.7 million visitors (students, teachers, families, and the general public) by providing archaeological assistance to eight different museums around the state (the Virginia Historical Society, Yorktown Victory Center, Jamestown Settlement, Colonial Williamsburg, Halifax Historic Museum, Glencoe Museum, Avcoa Museum, and the Prince George Heritage Center).
- **Executive Mansion:** Recognized the 200<sup>th</sup> Anniversary of the Executive Mansion.



## DEPARTMENT OF ENVIRONMENTAL QUALITY

- **Development of Phase I and Phase II of Virginia's WIP:** The agency, with input from the Department of Conservation and Recreation, drafted Phase I and Phase II of Virginia's Watershed Implementation Plan, which were approved by the federal EPA in December of 2010 and March of 2010, respectively. The plan charts out actions necessary to achieve the Chesapeake Bay TMDL pollution reduction goals between now and 2025 with the greatest emphasis on actions planning through 2017 and reflects the inputs of Virginia's stakeholders and localities and provides a solid framework to include the localities in participating in pollution reduction goals.
- **Wind Permit-By-Rule:** The Wind PBR Regulation became final in December 2010 and many believe it is the best in the nation. Environmental groups praised its rigor and the certainty and timeliness that it provides. Developers utilizing the Wind PBR and web-based agency guidance frequently compliment Virginia's approach, especially as it compares to other states.
- **Water Quality Consolidation:** Effective July 1, 2013, all of the water quality permitting programs moved from the Department of Conservation and Recreation to the Department of Environmental Quality. This government reform action will allow for a more streamlined permitting process that will benefit business while still protecting natural resources.
- **Recycling Rate Report:** DEQ compiles data submitted by the solid waste planning units which represent information from 234 Virginia cities, counties, and towns. Virginia's state recycling rate increased from 40.5% 2010 to 43.5%.
- **Environmental Impact Review:** Since January 2010, DEQ has completed environmental reviews of 960 federal, state, and local projects. The projects reviewed include 509 federal projects, 224 state projects, and 227 local projects.
- **Corporate Sustainability:** Held the first Corporate Sustainability Roundtable recognizing the efforts of Virginia businesses.
- **Air Quality:** There has been a 92% reduction in ozone statewide in the last 4 years making 2013 was the best year on record for clean air setting a record for the fewest number of days (2) that did not meet the current ozone standard. In the last four years, major power plants have reduced emissions of sulfur dioxide by 66%, nitrogen dioxide by 43%, and carbon dioxide by 27%.

# DEPARTMENT OF GAME AND INLAND FISHERIES

- **Investments in Dam Safety:** With \$9.7 million of bond money that was dedicated during the Governor's term for repairs and upgrades to bring DGIF's inventory of dams into compliance with state dam safety requirements have been accelerated and the agency will now be able to address its needs on its 19 high hazard dams that it owns on an accelerated timetable.
- **One-Stop Customer Service:** DGIF and the DMV entered into a partnership to improve customer service by allowing constituents to obtain boat registrations and titles and hunting and fishing licenses from DMV Customer Service Centers.
- **Hunting Access:** During the Governor's term, three new Wildlife Management Areas encompassing more than 3,000 acres have been put into conservation and opened to the public: Mattaponi in Caroline County (2,542 acres), Doe Creek in Accomack County (447 acres) and Redbud Run in Frederick County (33 acres). In the last four years, hunters have harvested over 927,000 deer, 8,600 bear, 6,600 turkeys, and the populations of all these species is up.
- **Boating Access:** DGIF developed a Grant-to-Localities for Public Boat Access in FY2013 which led to the acceptance of 13 new and improved boat ramp applications from all regions of the state.
- **Re-establishment of Virginia's Elk Herd:** The last of Virginia's native elk herd was lost during the late 19th century. In partnership with Buchanan County, the Rocky Mountain Elk Foundation, Kentucky, and Missouri, in 2012 the first elk were placed in the Commonwealth as a part of a three-year effort to re-establish this species in Southwest Virginia. This was followed by a second restocking in May 2013 and the final stocking is planned for May 2014.
- **Re-establishment of the Back Bay Largemouth Bass Population:** Historically, Back Bay had been nationally recognized as a top destination for bass fishermen. This fishery declined in more recent times due to increased salinity and loss of submerged aquatic vegetation. SAV levels have recovered and DGIF has commenced a three-year stocking effort to restore the fishery. The first stocking occurred in May 2012, the second during May 2013, and the final stocking is planned for May 2014.
- **Eagles:** The bald eagle breeding population within the Virginia portion of the Bay now numbers over 800 pairs, a dramatic recovery for the species.
- **Osprey:** The osprey breeding population within the Chesapeake Bay has recovered from 1,400 pairs in the early 1970s to more than 8,000 pairs today, with the Bay now supporting the largest breeding population of osprey in the world.



# VIRGINIA MUSEUM OF NATURAL HISTORY

- **Museum Without Walls:** Established the ‘Museum without Walls’ plan to reach a greater audience throughout the Commonwealth. The museum supports 17 offsite visitor experiences spread across the Commonwealth and into North Carolina. These sites are visited by nearly a quarter million people annually and focus on science education, including Virginia SOLs.
- **Published Research:** In 2011 & 2012 VMNH scientists and collections staff published eight peer-reviewed papers and one book and made thirty research presentations to more than 1,100 individuals outside the museum. Curators granted nineteen loans of 490 scientific specimens to other institutions and agencies, including seven outside Virginia.
- **Fossil Protection and Collection:** Conducted fossil salvage yielding Cretaceous and Devonian specimens from two Virginia institutions. Fossils from Montana dinosaur expeditions of the 1990s were salvaged from the Shenandoah Valley Discovery Museum. Approximately 100 field jackets were obtained, many representing an individual Triceratops which is currently being prepared in public view. A Virginia Tech collection of fossil plants was obtained which includes examples of some of the earliest of earth’s land plants of the Devonian period.
- **Teacher Training:** Museum staff trained more than 200 Virginia elementary and middle school teachers in the state’s science Standards of Learning from 2010-2013 during week-long, immersive programs conducted at Virginia State Parks. The Virginia Science Standards Institute amplifies science instruction by preparing teachers for the classroom.
- **Student Outreach:** Engaged approximately 45,000 students in SOL-based education programs from 2010-2013. Student interactions included on-site visits by classes and homeschoolers, as well as experiences where our educators in Martinsville, Charlottesville, or Hampton visit schools directly with museum materials to give instruction designed to strengthen student understanding of the science SOLs.
- **Crime Scene Investigation:** Trained 273 law enforcement personnel in crime scene investigative techniques from 2011-2013.
- **Hahn Hall of Biodiversity:** The Hahn Hall of Biodiversity opened at the Virginia Museum of Natural History in August 2010. Dr. T. Marshall Hahn, Jr., president emeritus of Virginia Tech, donated dozens of African wildlife specimens from his personal collection to the museum for use in the exhibit.
- **Carmel Church:** Excavated two tons of 14-million year old fossils from the Carmel Church Quarry (Caroline County), bringing the total number of fossil marine and terrestrial animals recorded there to 56.



“Virginia Indians are not only an integral part of our history but continue to be an important part of our society.”

*-Governor Bob McDonnell*



# VIRGINIA INDIANS



- The Governor signed four proclamations recognizing Virginia Indian Heritage Month in ceremonies with Virginia's eleven state recognized tribes.
- The Governor participated in four tax tribute ceremonies with the Chiefs of the Pamunkey and Mattaponi tribes honoring treaty requirements for over 330 years.
- Tribal Consultation: Established an Annual Tribal Consultation meeting, with the eleven state recognized tribes.
- Set up a process by which the tribes with reservations were able to receive emergency assistance after Hurricane Irene.
- Published first ever Basic Briefing on Virginia Indians report for the General Assembly.
- Proposed a new process for future tribal recognition.
- The Governor participated in a ceremony to permanently protect the globally significant center of Paramount Chief Powhatan's village, Werowocomoco.



“It’s been a great ride.”

- Doug Domenech